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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Catherine Coutey

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EXAMINER

DUCHENEAUX, FRANK D

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

02/22/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

info@lmiplaw.com

Office Action Summary	Application No. 10/599,883	Applicant(s) COUTEY ET AL.	
	Examiner FRANK D. DUCHENEAUX	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-16 is/are pending in the application.
- 4a) Of the above claim(s) 9-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8 and 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/3/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Examiner's Note

The examiner acknowledges the cancellation of claim 4 and the addition of new claims 12-16 in the amendments filed 12/3/2009.

Election/Restrictions

1. Applicant's election of Group I, claims 1-8, in the reply filed on 12/3/2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 9-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/3/2009.

Response to Amendment

3. Applicant's arguments, see pages 2 and 19, filed 12/3/2009, with respect to the objection of the abstract have been fully considered and are persuasive. The objection of the abstract has been withdrawn.

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4. Applicant's arguments, see pages 3-9 and 19, filed 12/3/2009, with respect to the objections of the specification have been fully considered and are persuasive. The objections of the specification have been withdrawn except as follows: Paragraph 9 of the previous action objected to the specification since the title of the invention was not in the upper case without emboldened fonts. The examiner notes that this objection has not been obviated in the amendments and as such, the objection is maintained and repeated below.

5. Applicant's arguments, see page 20, filed 12/3/2009, with respect to the objection of claims 2-8 have been fully considered and are persuasive. The objection of claims 2-8 has been withdrawn.

6. Applicant's arguments, see pages 20-21, filed 12/3/2009, with respect to the rejection of claims 1-8 under 35 U.S.C. 112, 2nd paragraph have been fully considered and are persuasive. The rejection of claims 1-8 has been withdrawn.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

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- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

7. The disclosure is objected to because of the following informalities: the title should appear in upper case, without underlining or bold type.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. **Claims 1-3, 5-6, and 12-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Centner et al. (US 2004/0097638 in view of Peters et al (US 6258888 B1).

Regarding claims 1-2, 5, 12 and 14, Centner teaches aqueous dispersions of polymers and to PSA adhesives based on said polymers (para 0008), said polymer synthesized from monomers (a), (b), (c), (d), (e) and (f) where (a) is vinyl acetate from 5 to 15% by weight (para 0019 and 0048); (b) is acrylic acid, methacrylic acid, itaconic acid, maleic acid, fumaric acid or maleic anhydride from 2 to 5% by weight (para 0049 and 0054); (c) is ethyl acrylate from 20 to 40% by weight (para 0050 and 0058); (d) is styrene from 0 to 8% by weight (para 0022, 0051 and 0060-0061); (e) is 2-ethylhexyl acrylate from 40 to 70% by weight (para 0052 and 0062-0063); and (f) are crosslinkers from 0 to 10% by weight (para 0053 and 0066), which overlaps the ranges as claimed in current claim 1 and claim 12. Centner also teaches that the amounts by weight are always based in the polymer (para 0017) and that the polymers are prepared by emulsion polymerization (para 0068). Finally, Centner teaches aqueous polymer dispersions with solids contents of from 15 to 75 by weight (para 0900).

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The examiner notes that the limitations of claim 1 requires a mixture of 100 parts of an aqueous acrylic dispersion and 0.05 to 30 parts of a crosslinking system, but does not provide a compositional % for a solvent in relation to the other components. Given the claims their broadest reasonable interpretation, and bracketing the upper and lower bounds of the “solvent % by weight” by assuming that the dispersion contains no polymer (100 % solvent) and that the dispersion contains only polymer (0 % solvent), the % by weight given for crosslinker(s) (f) of the reference overlaps those ranges as presently claimed and intrinsically provides, given that monomer (f) is a part of the polymer, for (f) to be incorporated into the aqueous phase. Centner continues to teach PSAs to join substrates (support layer, coated) (para 0009). Centner is silent to the crosslinkers as recited in current claim 1 and the compositional percentages of the crosslinkers as recited in current claim 5.

However, Peters teaches aqueous polymer emulsions (title) with the aqueous emulsion polymer system comprising polymers of the (meth)acrylates (i.e. Table 2), said polymers possess functional groups for imparting latent crosslinkability, said functional group is an epoxy (column 14, lines 7-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Centner and Peters providing an aqueous polymer emulsion for pressure-sensitive adhesives with crosslinking agents such as epoxies as it is well known in the art that said agents provide enhanced cohesion and to adjust the % weight of the crosslinking agents for the intended application since it has been held that discovering an

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optimum value of a result-effective variable involves only routine skill in the art (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)) towards a pressure sensitive adhesive composition for a pressure-sensitive adhesive layer with a cohesion strength as dictated by application as in the present invention.

Regarding claims 3 and 13, Centner teaches a particle size distribution which is targeted for a low viscosity (para 0091, lines 13-14). Centner is silent to a mean particle size is less than 500 nm and less than 200 nm.

However, Peters teaches aqueous polymer emulsions (title) comprising particles with a weight average particle diameter (i.e. size) of from 30 to 180 nm and 180 to 500 nm (column 8, lines 15-20). Peters also teaches that it is known to achieve high solids content in a polymer emulsion concomitant with acceptable low viscosity by arranging for the polymer to have a polymodal size distribution (PSD) and a broad PSD (i.e. Gaussian) is also a considered polymodal (column 2, lines 4-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the aqueous polymer emulsions as taught by Centner with the particle sizes and distributions as taught by Peters towards an aqueous polymer dispersion pressure sensitive adhesive formulation with increased solids contents and low viscosity, providing an solution requiring less solvent while simultaneously allowing for easier coating of the emulsion on a substrate as in the present invention.

Regarding claim 6, Centner teaches that the PSAs are especially suitable for producing self-adhesive articles such as adhesive films, e.g. protective films, said articles composed of a backing (monolayer) with a layer of adhesive applied to one or both sides and said backing material made of polymer films of polyolefins (para 0103-0105).

11. **Claims 7-8 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Centner et al. (US 2004/0097638 in view of Peters et al (US 6258888 B1) and in further view of Nakagawa et al. (US 6586090 B2).

Regarding claims 7-8 and 16, Centner and Peters teach the aqueous dispersions of polymers and to PSA adhesives as in the rejection of claim 1 (and 6) above. Centner also teaches a backing made from polymer films of polyolefins (para 0104). Centner and Peters fail to teach a support layer comprising the polymers of current claims 7-8 and a support further containing 0.1 to 25% by weight of one or more additives chosen from slip agents, processing aids, matting agents, dyes or pigments, anti-ageing agents, UV absorbers and anti-blocking agents.

However, Nakagawa teaches an adhesive tape and substrate for adhesive tape (title), wherein the substrate comprises component A and component B (column 4, lines 1-7), said component A is, *inter alia*, an ethylene-acrylic acid copolymer (column 4, lines 38-67, specifically lines 66-67, and column 5, lines 1-8), which imparts flexibility and stretchability to a substrate (column 4, lines 18-21); said component B is a polymer comprising, *inter alia*, polypropylene and ethylene

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(column 5, lines 9-46, specifically, lines 43-46), which suppresses thermal deformation of a substrate (column 5, lines 9-15); and said adhesive tape has an adhesive layer with acrylic type and emulsion type adhesives (column 8, lines 45-49). Nakagawa also teaches the concurrent use of a char forming aid as an inorganic flame retarder such as carbon black (pigment) (column 8, lines 3-6) in an amount of approximately 1% by weight based all the components of the substrate (component C8 in Table 1, example 7, and see also component C8 in column 10, lines 32-33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the Centner, Peters and Nakagawa to provide backing films with the propylene/ethylene copolymers and ethylene-acrylic acid copolymers, which would intrinsically provide increased bonding between the backing films and acrylic adhesive layers as presently claimed, and a flame-retarding pigment such as carbon black towards an adhesive tape with a support backing with suppression of deformation due to heat while maintaining tape flexibility and stretchability as in the present invention.

12. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Centner et al. (US 2004/0097638 in view of Peters et al (US 6258888 B1) and in further view of Endo et al. (WO 01/05589). The examiner notes that the US 6872447 B1 publication is the English language equivalent of WO 01/05589 and that the cited portions below are taken from the ~447 reference.

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Regarding claim 15, Centner and Peters teach the self-adhesive articles such as adhesive films, e.g. protective films, said articles composed of a backing with a layer of adhesive applied to one or both sides of the backing as in the rejection of claims 1 and 7 above. Centner and Peters are silent to a support that is a trilayer.

However, Endo teaches surface-protective PSA sheet (title) comprising a three-layered film formed by laminating layers A, B and C with a PSA layer formed on layer C, said sheet having, *inter alia*, excellent weathering resistance undergoing neither chalking or fracture, which can be manufactured inexpensively with reduced manufacturing process (abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Centner, Peters and Endo toward a self-adhesive article having a backing formed of three layers thereby providing excellent weatherability and reduced cost and manufacturing processes as in the present invention.

Response to Arguments

13. Applicant's arguments, see pages 21-26, filed 12/3/2009 with respect to the prior art rejection of claims 1-2 and 6 over Centner et al under 35 U.S.C. 102 (b), claims 3-5 over Centner et al. in view of Peters et al. under 35 U.S.C. 103(a) and claims 7-8 over Centner et al in view of Nakagawa et al. under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

The examiner's complete response follows:

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The applicants have imported the limitations of previous claim 4 (now cancelled) into current claim 1 and argue that the combination of the Centner and Peters is improper because Centner does not teach the use of a crosslinker and, while Centner teaches an adhesive, the Peters' invention relates to ink, which renders the two references as non-analogous art. Applicants specifically point to paragraph 65 of the Centner reference wherein it is disclosed that the use of crosslinkers are not necessary and assert that a prior art reference must be considered not only for what it teaches, but also for portions that would lead away from the claimed invention.

The examiner directs the applicants' to paragraph 0053, 0064 and 0066, wherein Centner clearly disclosed the use of crosslinkers (f) and, while Centner does disclose that said (f) monomers are not necessary to practice the invention it is noted that, "nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims." In re Nehrenberg, 280 F.2d 161, 126 USPQ 383 (CCPA 1960). It is the examiner's position that Centner does not lead away from the claimed invention given that paragraph 0065 is but one preferred embodiment of Centner and that a fair reading of the reference as a whole (see also abstract and paragraphs 0007, 0032 and 0066) clearly disclosed that in another embodiment, crosslinkers are used. It is further noted that the Peters reference generally teaches aqueous polymer emulsions, which are well known in the adhesive art to serve as forms of adhesive solutions to be applied to a substrate for the formation of a substrate-backed adhesive tape. Thus, a reference such as Peters would have commended itself to one of ordinary skill in the art to remedy a deficiency in the analogous Centner reference. In

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addition, column 15, lines 20-23 of the Peters reference explicitly discloses that the aqueous emulsions of the reference are used for adhesives.

In the first full paragraph of applicants' arguments, the applicants argue that the examiner's assumptions in paragraph 23 of the previous action regarding the examiner's interpretation of %wt. composition of the current claims is improper given that said assumption does not satisfy the requirements for an anticipatory rejection under 35 U.S.C. 102.

The examiner respectfully disagrees with the applicants' assertion given that the current claims do not require a specific weight % or range thereof of solvent in the claimed dispersion. As set forth in the previous action, it is not without merit for the examiner to interpret that the current invention comprises any amount of solvent in a weight percentage that is minutely greater than 0% and minutely less than 100% solvent by weight and as such, the disclosure of the Centner would clearly anticipate such a broad range of the % weight of solvent composition and the associated percent weight of the solid content as well as the individual monomeric components of the presently claimed mixture.

In the second full paragraph on page 25 of the applicants' arguments, the applicants assert that Peters' emulsions comprise a hydrophobic polymer part and an oligomer part of a low molecular weight.

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The examiner notes that is uncertain from the applicants' arguments at this portion of the arguments to what relevance to the prior art rejections the applicants' arguments are directed.

The examiner reminds the applicants that the analogous Peters' reference is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely crosslinkers of a certain composition and % weight and a mean particle size within an emulsion, and in combination with the primary reference, discloses the presently claimed invention.

The applicants further argue that the Nakagawa reference fails to remedy the crosslinkers of current claim 1 and further, with reference to the abstract of Nakagawa, that the reference fails to teach that "each layer of the support comprises..." (emphasis provide by the examiner) the polymers set forth in current claims 7-8.

The examiner directs the applicants' attention to the rejection of claims 7-8 above, wherein it is noted that Nakagawa teaches the compositional components of the current claims and further to current claim 1, from which current claims 7-8 directly depend, wherein a support layer (singular) is recited. Based on the recitations of current claim 1 and current claims 7-8, and the dependencies of said claims, there is nothing in current claims 7-8 requiring more than one layer and such, the Nakagawa reference teaches the deficiencies of the Centner and Peters reference with regards to the limitations set forth in current claims 7-8.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANK D. DUCHENEAUX whose telephone number is (571)270-7053. The examiner can normally be reached on M-Th, 7:30 A.M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie E. Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. D. D./

Examiner, Art Unit 1794

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794